DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-020851
Date Inspected: 14-Feb-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 630
OSM Departure Time: 1500
Location: Job Site

CWI Name: Mike Johnson

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girders

Summary of Items Observed:
At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the following work performed by American Bridge/Fluor Enterprises (AB/F) personnel at the locations noted below:

A). Procedure Qualification Record Test

The QAI observed the welding and inspection of the Procedure Qualification Record (PQR)test plate identified as ABF-PQR-039-4. The welding was performed by Rick Clayborn, ID-2773, utilizing the Shielded Metal Arc Welding process and the 3.2 mm filler metal identified as E9018 H4R. The PQR was also utilized by the Quality Control (QC) inspector Mike Johnson as a reference to monitor the welding, to verify the Direct Current (DC) welding parameters and preheat/interpass temperatures. The filler metal appeared to comply with the AWS Specification, A5.5-06, and the AWS Classification E9018-M-H4R. The welding was performed in the overhead (4G) position with the test plate assembly positioned so that the plate was in an approximate horizontal plane and the weld metal deposited from the underside. The dimensions of the test plate assembly were verified as 29 mm thick, 500 mm wide and 650 mm in length. The single-v-groove dimensions, root=10 mm and a included angle of 30 degrees, appeared to comply with AWS D1.5-2002 joint designation identified as B-U2a. The material utilized for the testing, including the backing bar material, appeared to comply with the American Society of Testing Materials (ASTM) A709-485 HPS for the test plate material and A709-345W for the backing plate material. The welding of the test plate was not completed during this shift.

The average welding parameters were recorded by the QC inspector and verified by the QAI and were observed as

WELDING INSPECTION REPORT

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follows; 134.5 amps, 21.9 volts with a travel speed of 73.7 and a calculated heat input of 2.39 kj/mm. The amperage was verified utilizing a Fluke 289 True RMS Multimeter with a Fluke i1010 AC/DC current clamp and the voltage was verified utilizing a Fluke 189 True RMS Multimeter.

The digital photographs below illustrate some of the work observed during this scheduled shift.

Summary of Conversations:

There were general conversations with Quality Control Inspector Bonifacio Daquinag, Jr. at the start of the shift regarding the location of American Bridge/Fluor welding, inspection and N.D.E. testing personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer